

An International Framework for Adaptation Strategies

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www.unep.org/climatechange/adaptation/



Berlin Summer Dialogue 2011
Adaptation to Climate Change
Berlin, 27-28 September, 2011



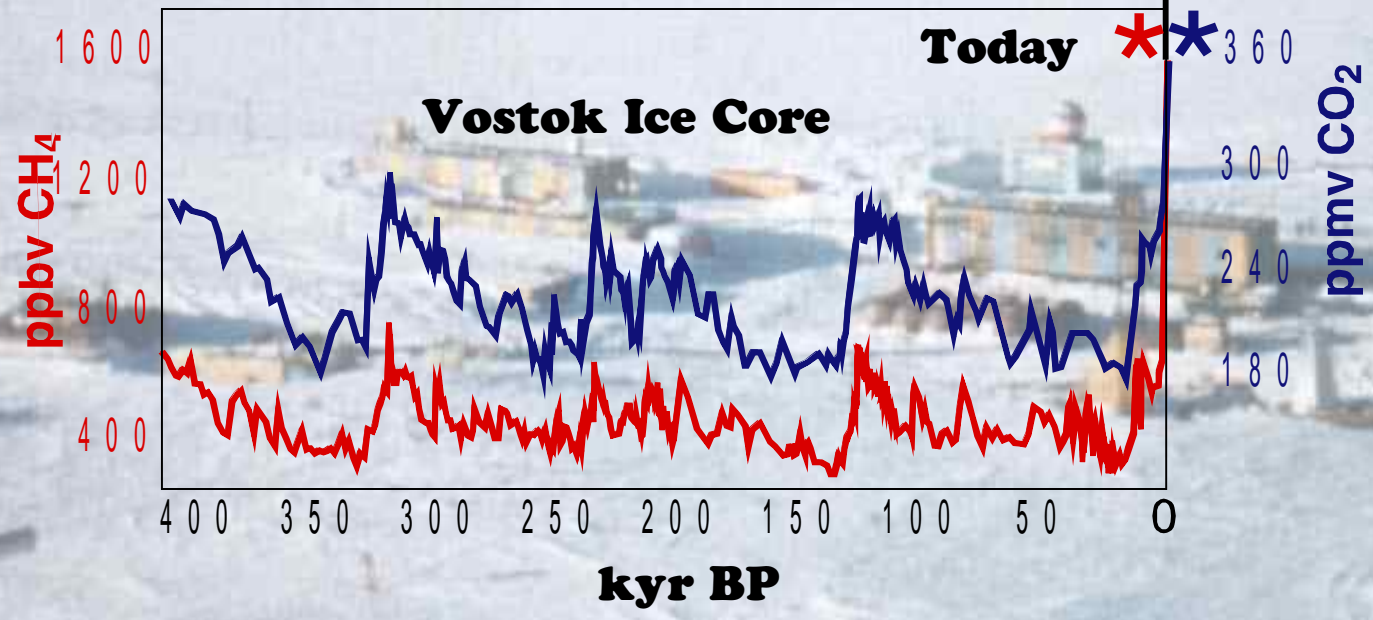
Outline

1. Global vs Local Climate Impacts
Hydrological Variability
Sealevel Rise
3. Global, National, Local Policy
Key issues for this session
4. UNEP Adaptation Strategy

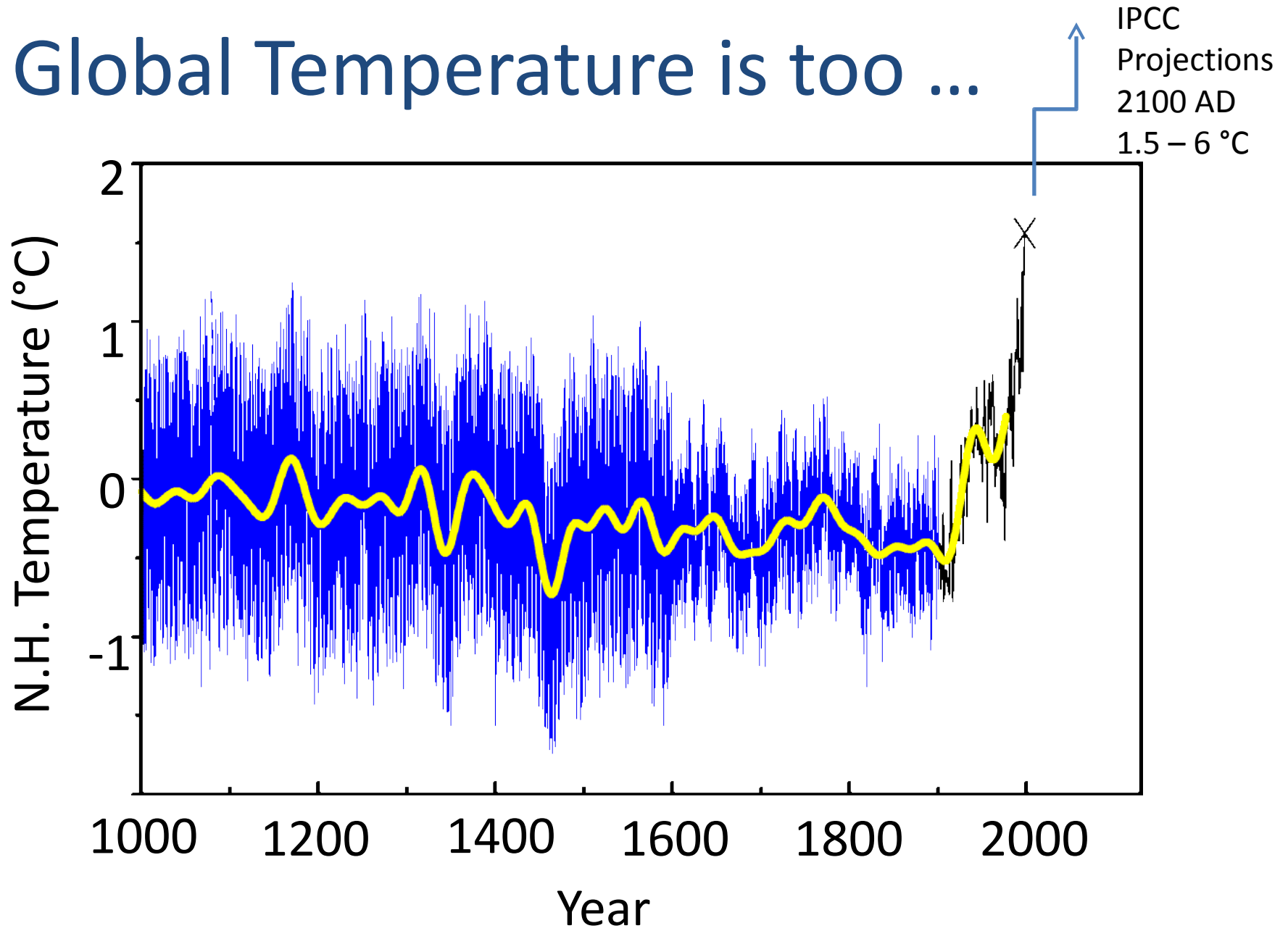


Greenhouse Gases are 'outside the envelope'

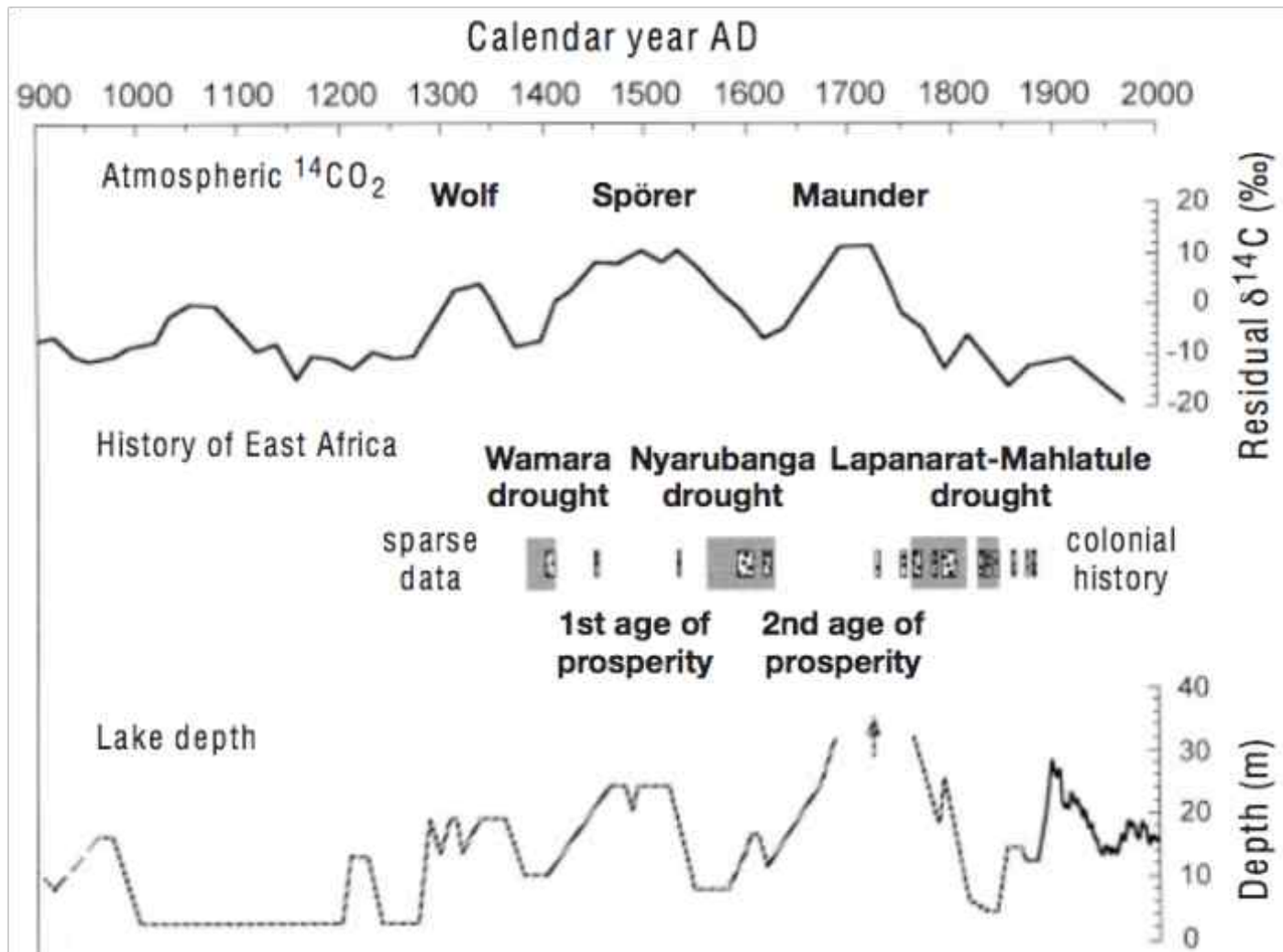
IPCC Projections
2100 AD
CO₂ (450-1100)
CH₄ (1500-3700)



Global Temperature is too ...

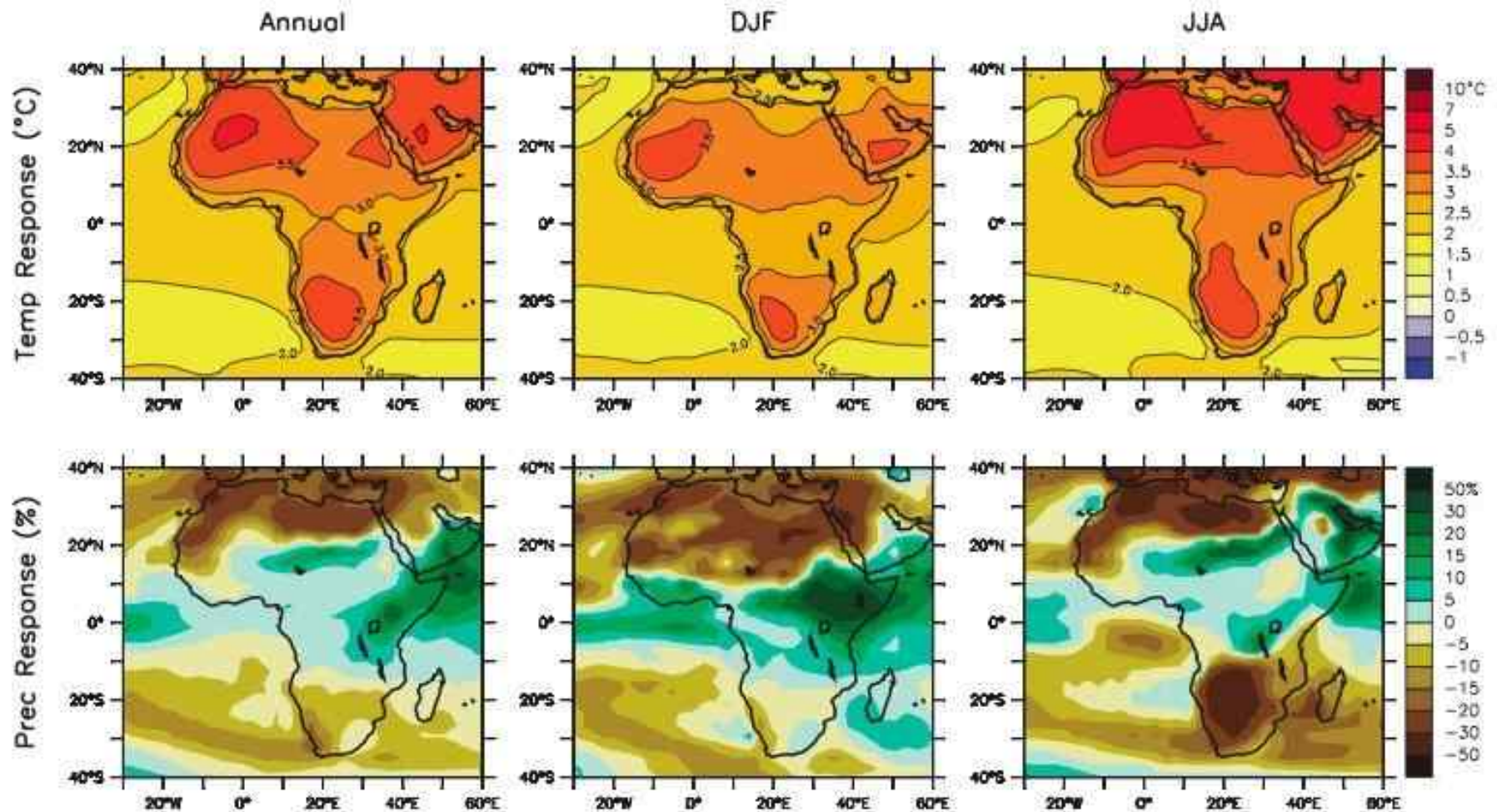


... but regional hydrological variability is not

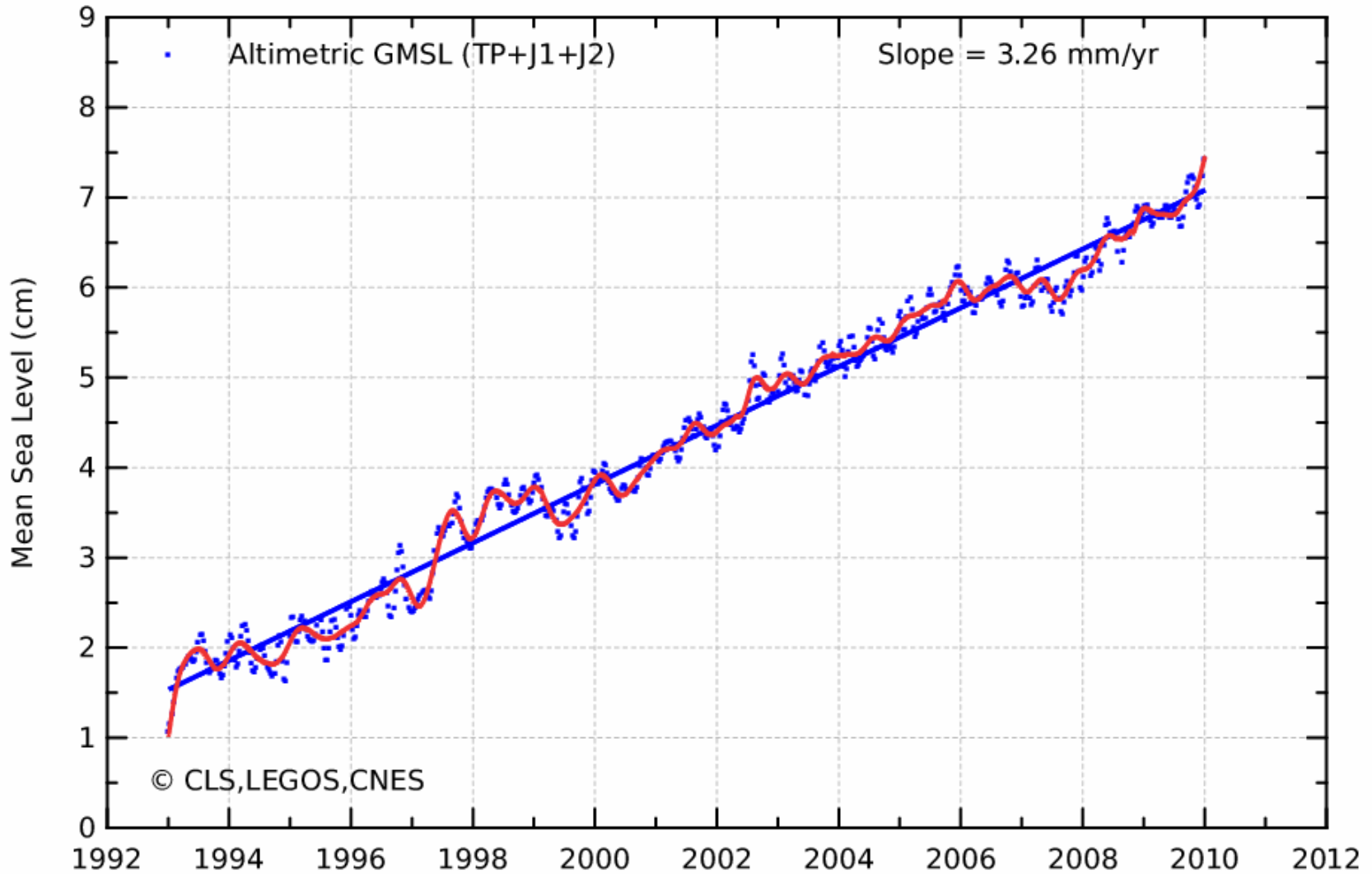


Verschuren, *Nature*, 2000

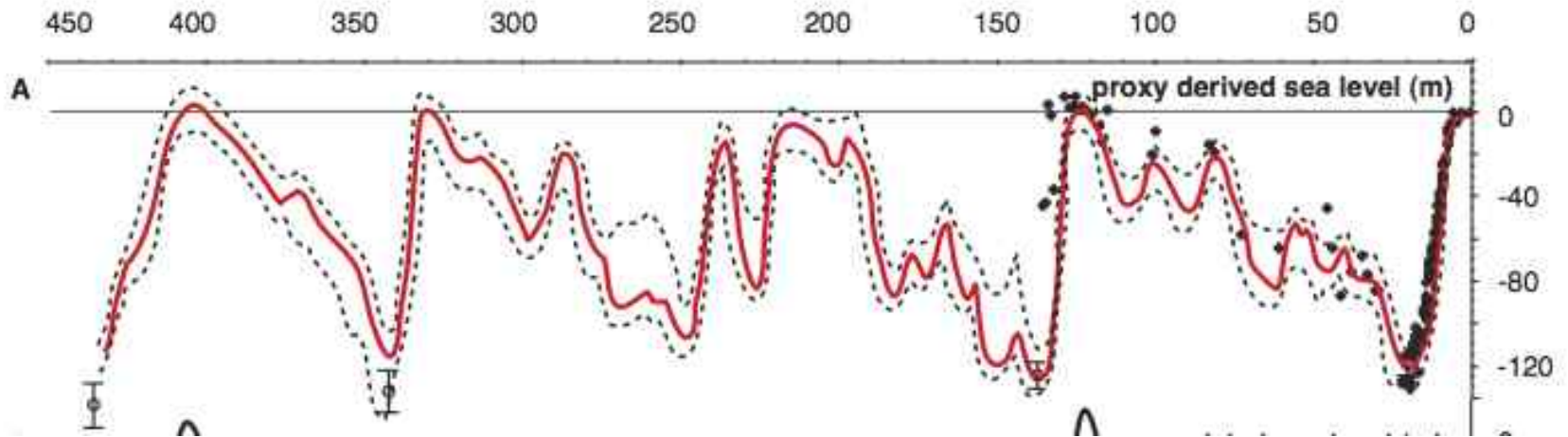
Downscaling global projections (here for 2100, from IPCC AR4) is **not** a sound basis for regional adaptation measures (have a look at the horn of Africa!). *Regional hydrological balance projections from climate model projections are not robust.*



Sea level rise: An Unprecedented, Steady, Global Signal?



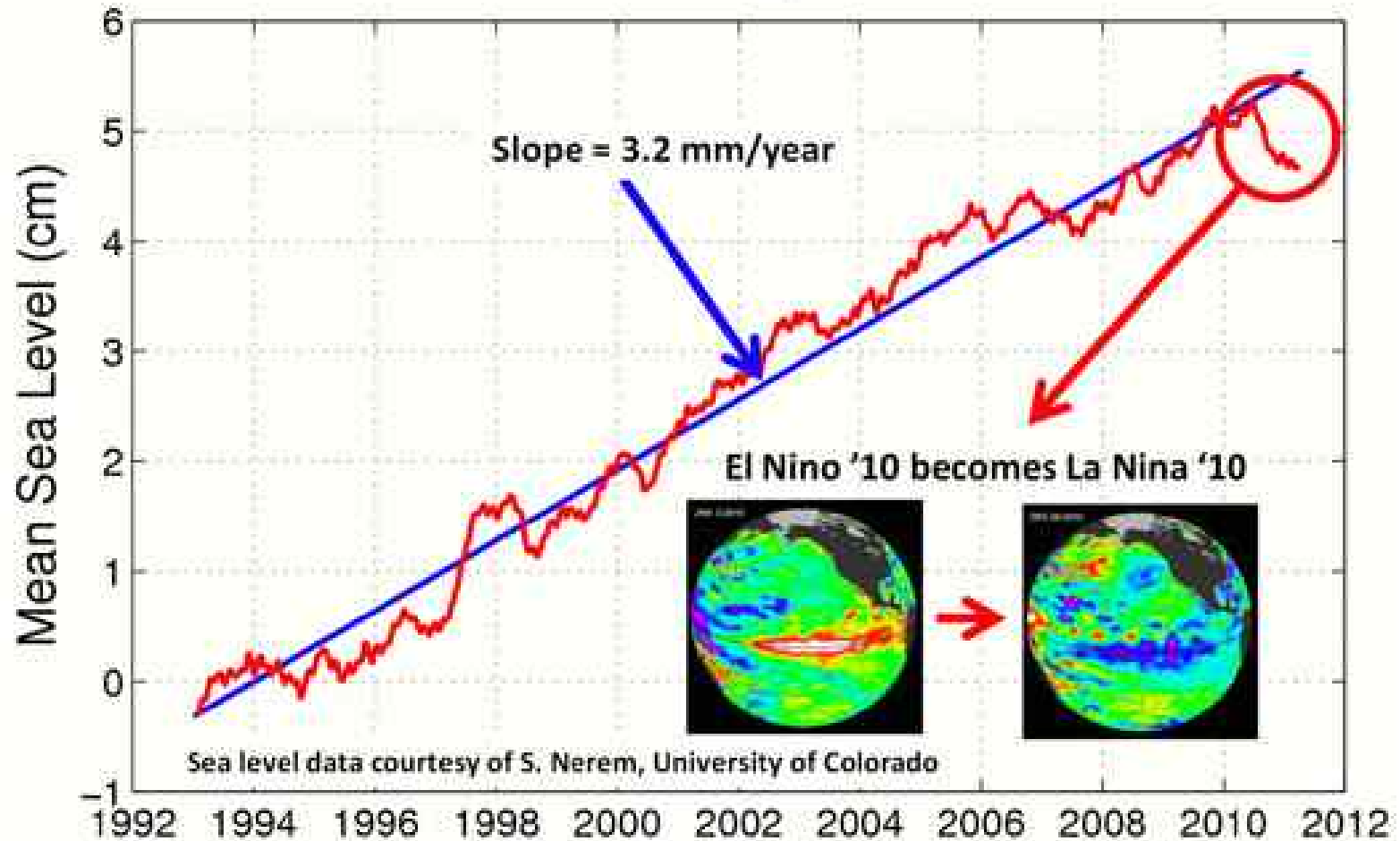
Not *unprecedented* ...



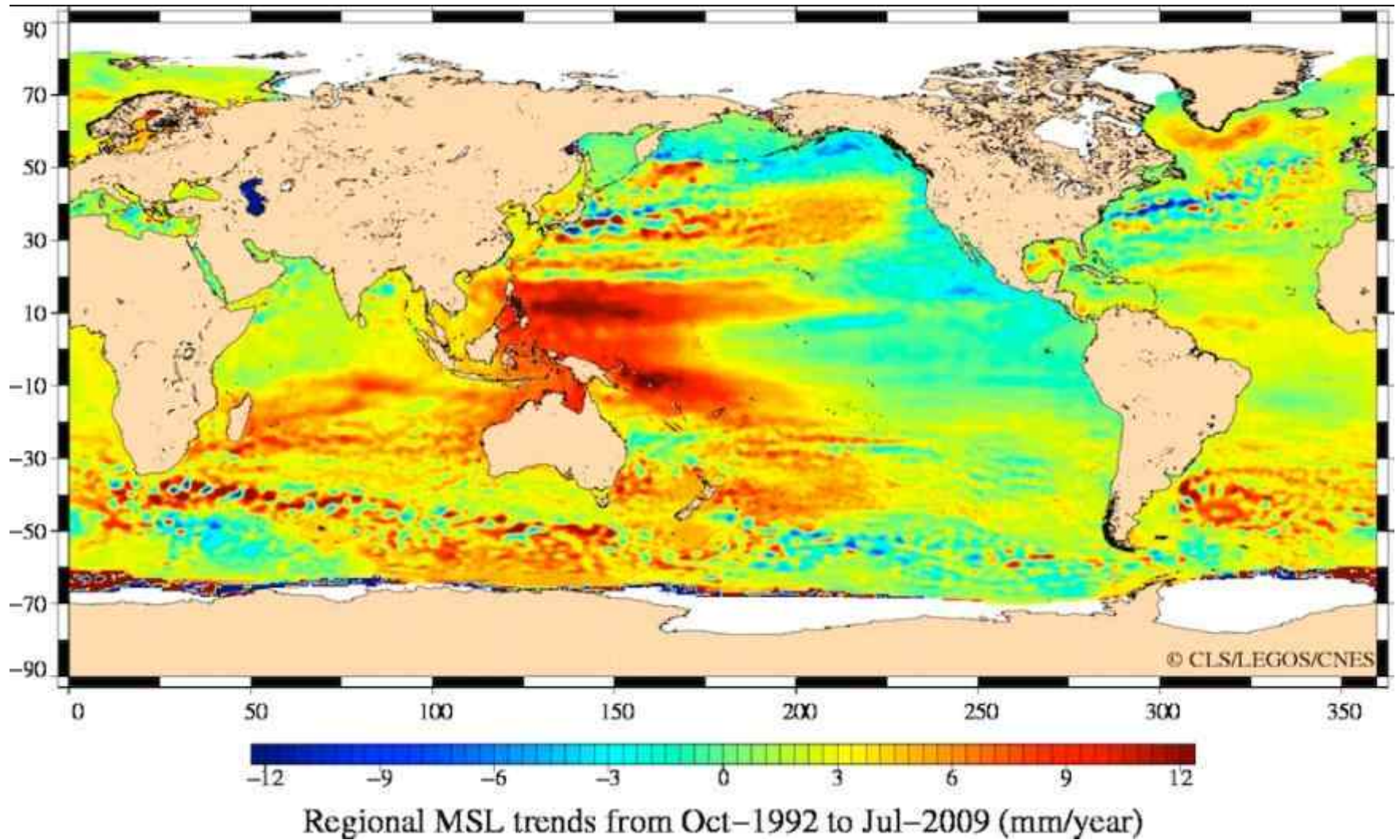
Past changes were large – far beyond projected future change

Not *steady* ...

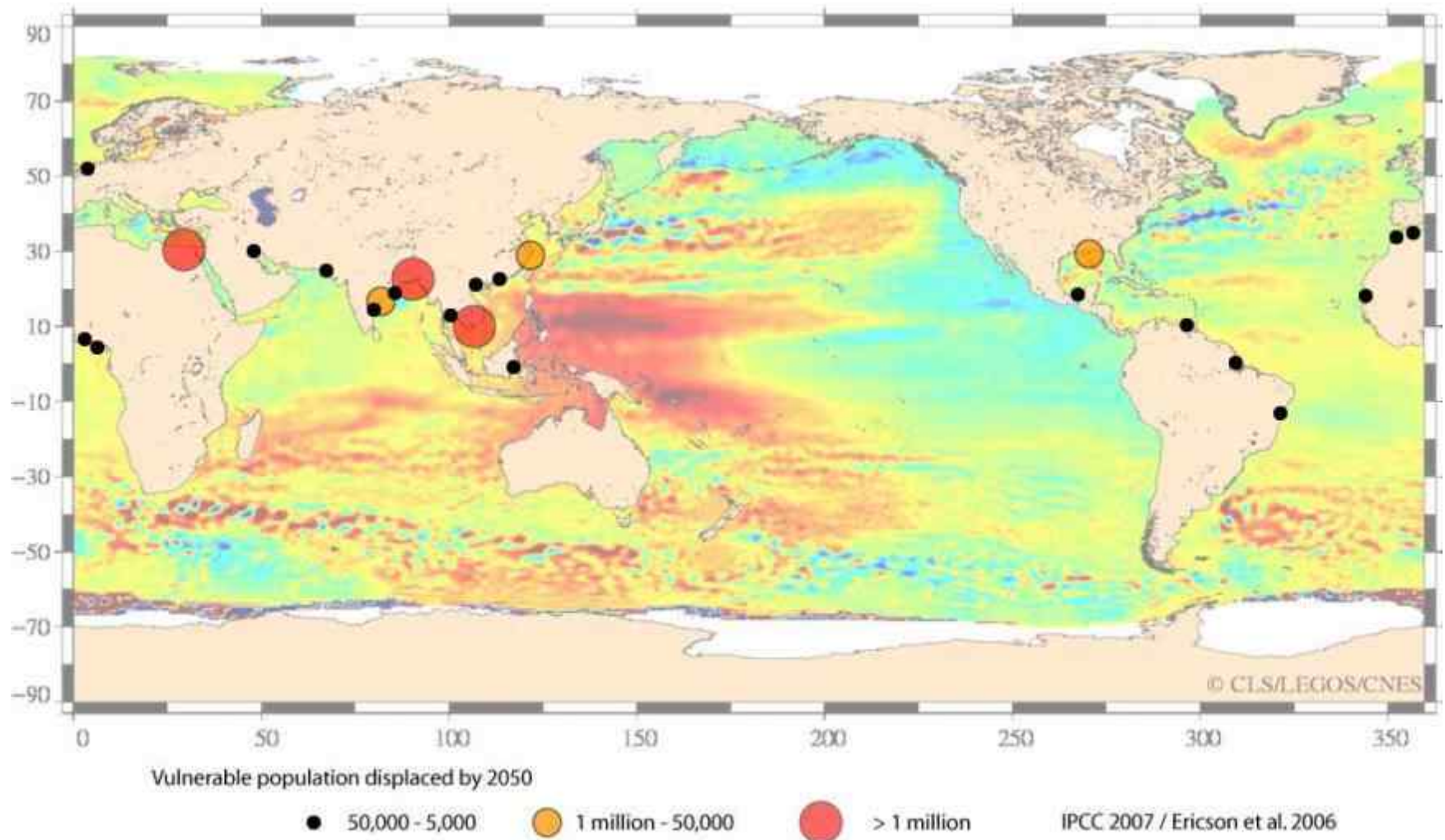
Global Sea Level Drops 6 mm in 2010



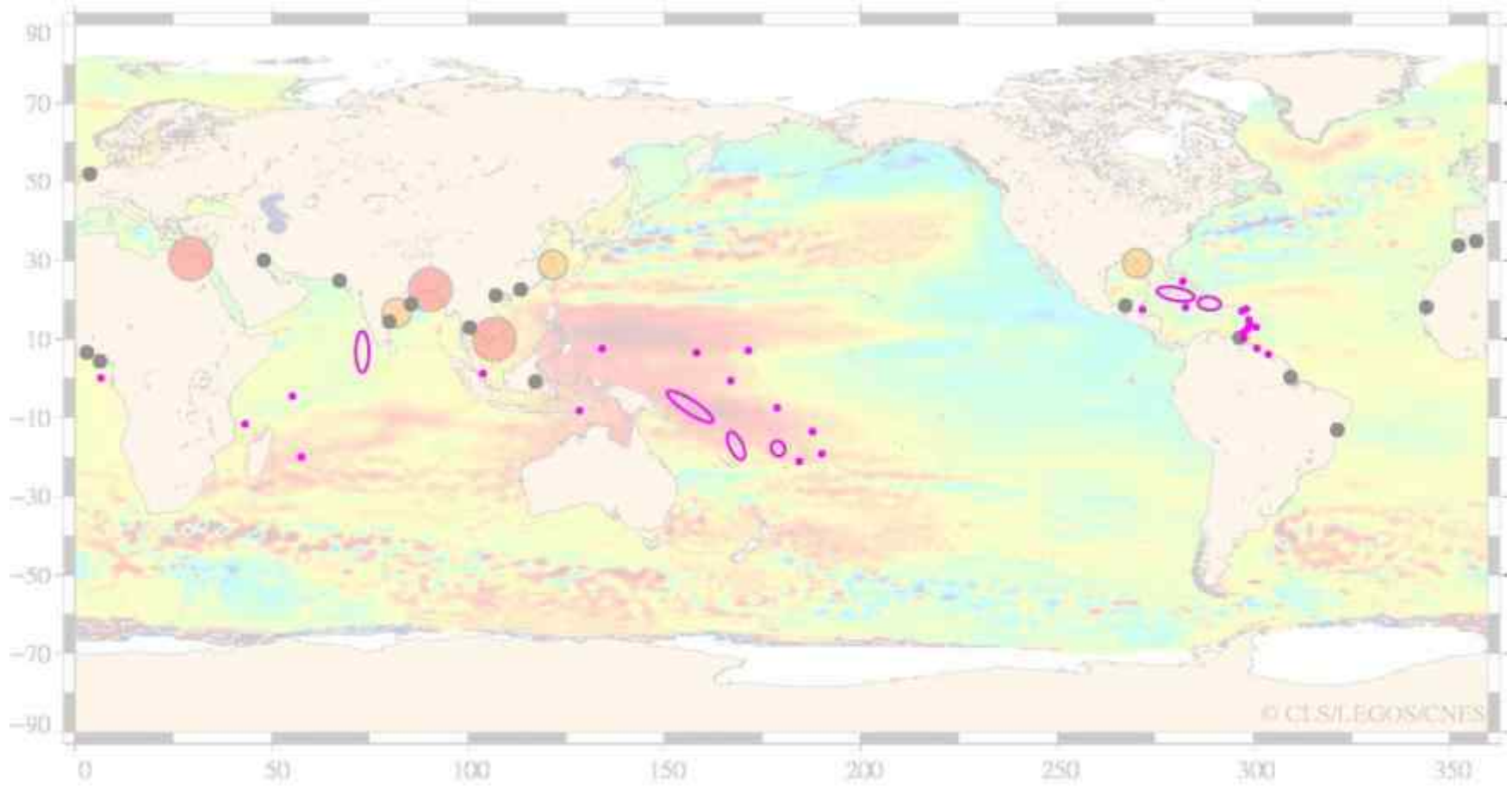
Not *global* ...



Thus, adaptation is mostly about local vulnerability



Vulnerability: Small Island Developing States



Small Island Developing States (AOSIS members)



Mitigation isn't working ...

International Energy Agency - 30 May 2011

CO2 emissions reach a record high in 2010; 80% of projected 2020 emissions from the power sector are already locked in.


Energy-related carbon-dioxide (CO2) emissions in 2010 were the highest in history, according to the latest estimates by the International Energy Agency (IEA).

... So adaptation is required



International
Energy Agency

- *Energy security*
- *Environmental protection*
- *Economic growth*
- *Engagement worldwide*



What International structures are essential for successful adaptation policy? What are the challenges and limits of a global governance framework for adaptation measures that are implemented primarily at the national, regional and local level?

The current tendency is towards many, weak and ineffectual international structures. Global institutions are only useful where there could be clear benefits to multilateral action – for example mitigation from reduced emissions. For adaptation there are only a few examples, but they surely include:

- (1) monitoring systems, which require a global footprint and common standards and
- (2) networks for knowledge exchange, capacity building and access to finance.



How can we ensure international strategies and programs are congruent with, and do not conflict with, national and local implementation measures?

The funding available for ‘international strategies and programs’ is at least 3 orders of magnitude lower than that for national and local actions (at UNEP for example ~\$100k vs ~\$100m per annum). Thus, by necessity global strategies must be built from the bottom up and fully congruent with the base. One danger might be to pretend otherwise, and waste time and money trying fruitlessly to assert top down governance.

To what extent is international adaptation policy linked with other policy areas?

Completely and inextricably. The primary adaptation challenge is primarily to promote economically and environmentally sound development policies. The Green Economy. UNEP works closely with UNDP, IUCN and other organizations for this reason.



UNEP Climate Change Adaptation Strategy



1. Demonstrate **Ecosystem Based Adaptation**
- where does it work best and when it is cost effective
2. Support development of a **Global Adaptation Network**
3. Facilitate **National Access to Adaptation Funding**

An aerial photograph of a coral reef system. The water is a vibrant blue, and the reef structures are visible as brownish, textured patches of varying sizes and shapes. The reef extends from the foreground towards the horizon, where it meets a darker blue ocean. The sky is a clear, light blue.

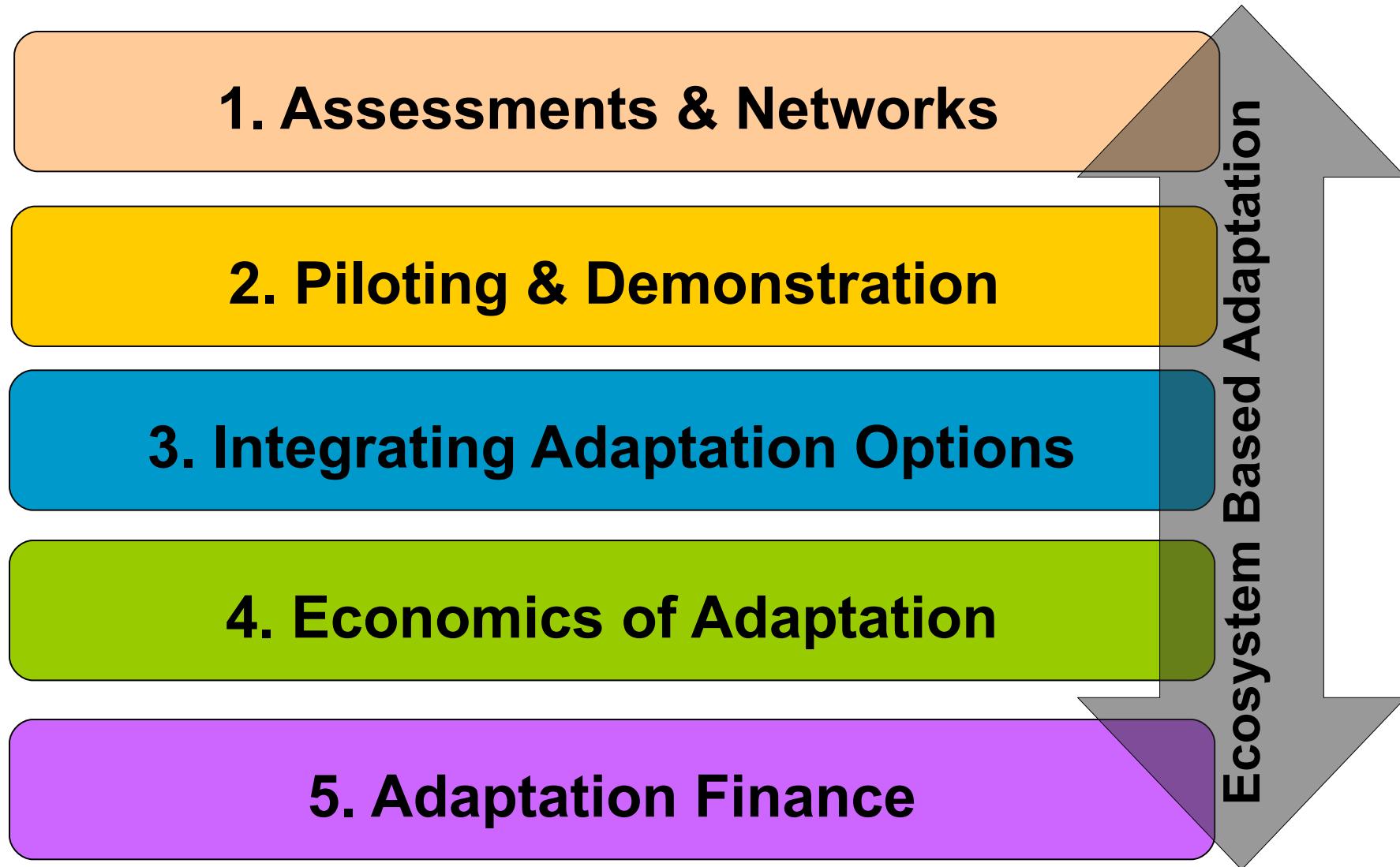
Multiple Threats

Warming – Acidification – Agricultural Runoff – Fishing – Tourism

Multiple Benefits

Climate Resilience - Ecosystem Services - Biodiversity

UNEP's work streams for adaptation



Adaptation is a process, including understanding climate variability and societal vulnerabilities, evaluating costs and benefits, building capacity and learning from pilot actions.

Ecosystem-Based Adaptation is the use of the natural climate resilience of biodiversity and ecosystem services as part of an overall adaptation strategy to help people and communities minimize the negative impacts and benefit from the positive effects of climate variability and change.

Some Examples:

Water Security: Building Dams and Managing Forests

Coastal Defenses: Building Seawalls and Managing Coral Reefs





Ecosystem Based Adaptation in Mountain Ecosystems



Nepal, Peru & Uganda, 2011-2014
10 Million Euros



Supported by:



Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety

based on a decision of the Parliament
of the Federal Republic of Germany



Project objectives

- Strengthen the capacities of Nepal, Peru and Uganda to benefit from mountain ecosystem services including enhanced resilience to climate change using ecosystem based adaptation options;
- Reduce the vulnerability of communities dependent on mountain ecosystems.



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Project Components

- Development and application of methodologies and tools for mountain ecosystems;
- Implementation of EBA pilots at the ecosystem level to demonstrate both effectiveness and the economic case
- Formulation of relevant national policies



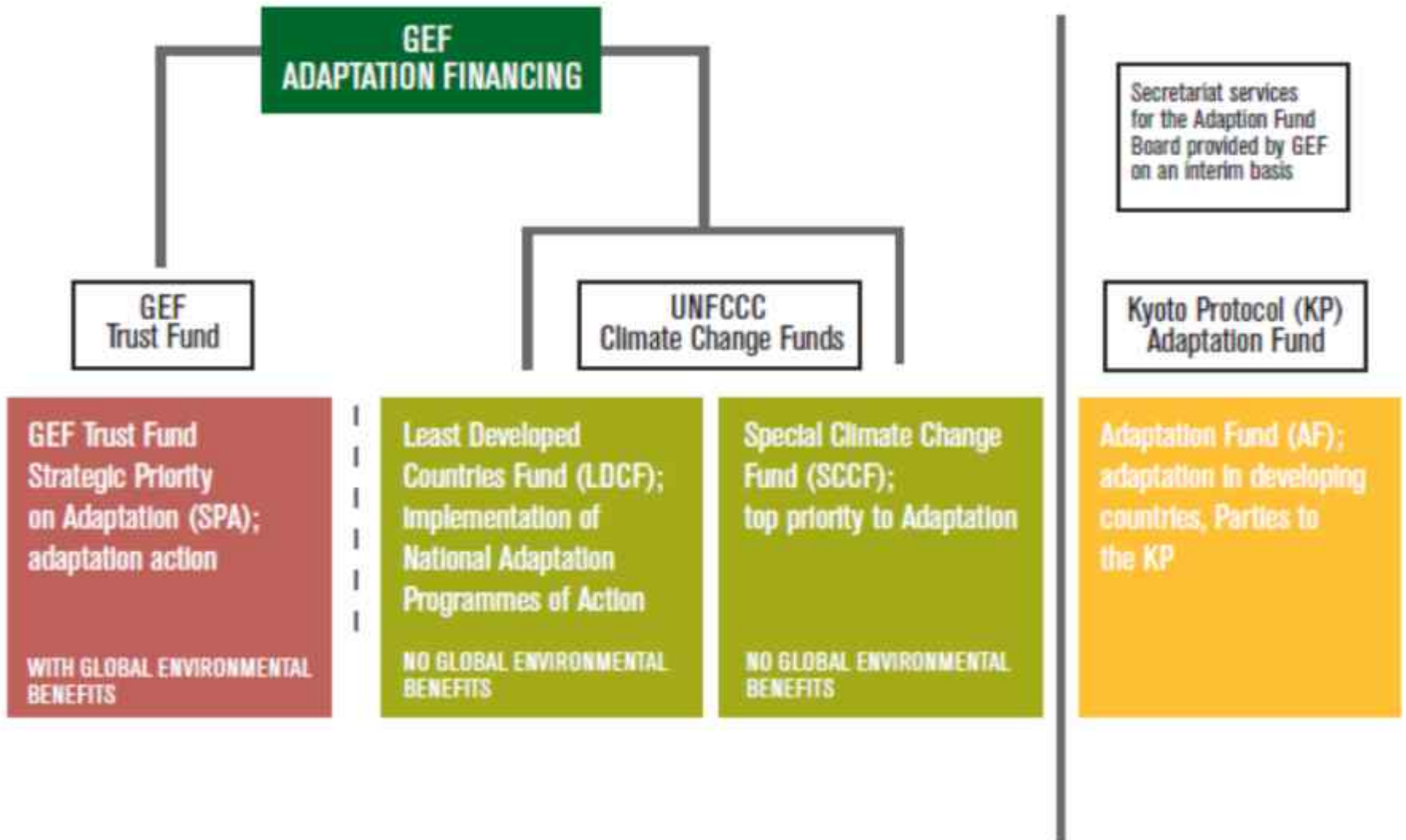
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Funds for adaptation



Take Home Messages

- **Climate change is not new:**
Learn from the past and use ecosystem based approaches, both for effectiveness and multiple benefits.
- **Don't adapt to Global averages:**
Focus on local, regional and hydrological impacts
- **Climate adaptation is not separable from environmental protection or economic development.**
Integrate and mainstream CCA policies.





Thank You....

